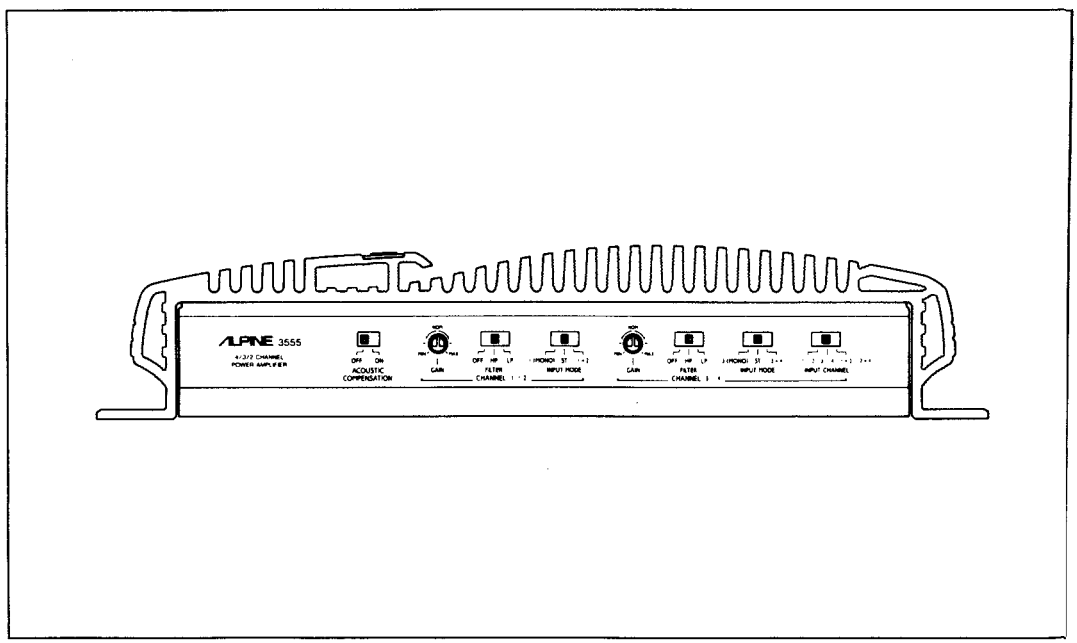
ALPINE®

OWNER'S MANUAL/BEDIENUNGSANLEITUNG/ MANUEL DU PROPRIETAIRE/MANUALE DEL PROPRIETARIO/ MANUAL DEL PROPIETARIO/BRUKSANVISNING

3555

4/3/2 Channel Power Amplifier



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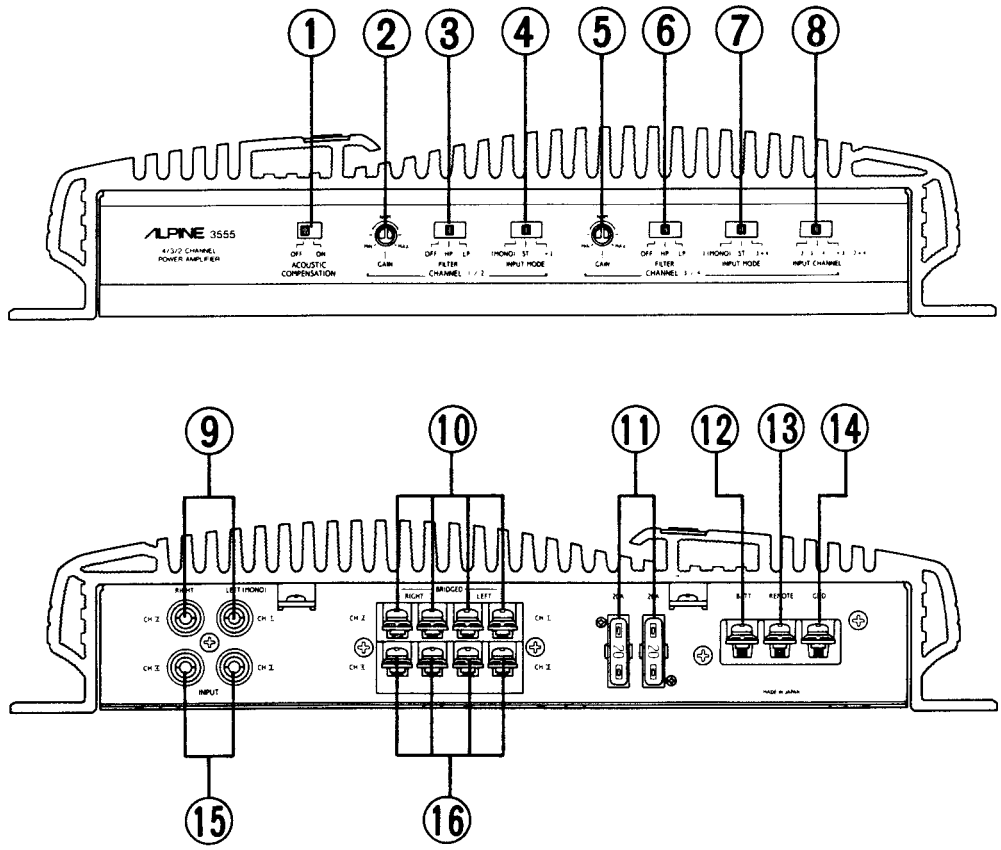


Fig. 1/Abb. 1

INSTALLATION/EINBAU/INSTALLATION/INSTALLAZIONE/ INSTALACION/INSTALLATION

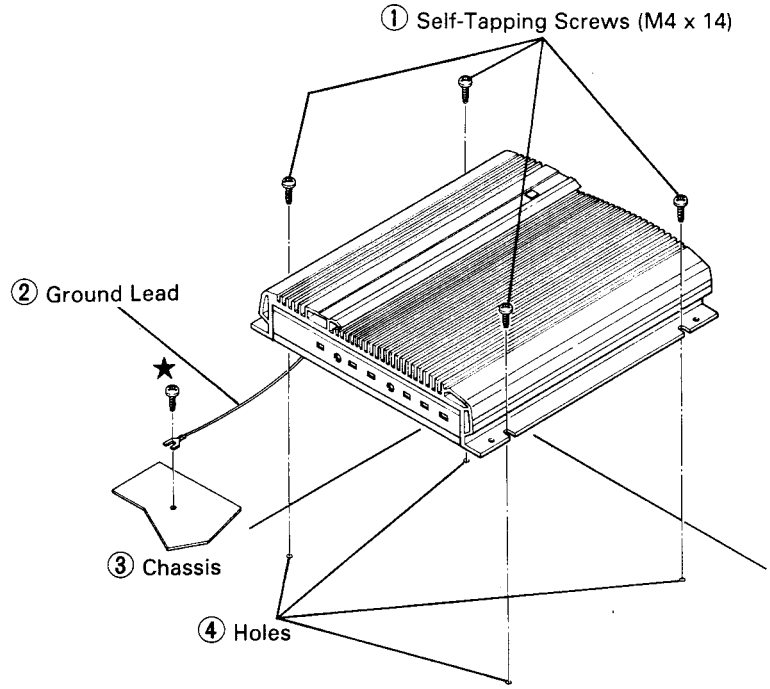


Fig. 2/Abb. 2

CONNECTIONS/ANSCHLÜSSE/CONNEXIONS/COLLEGAMENTI/ CONEXIONES/ANSLUTNINGAR

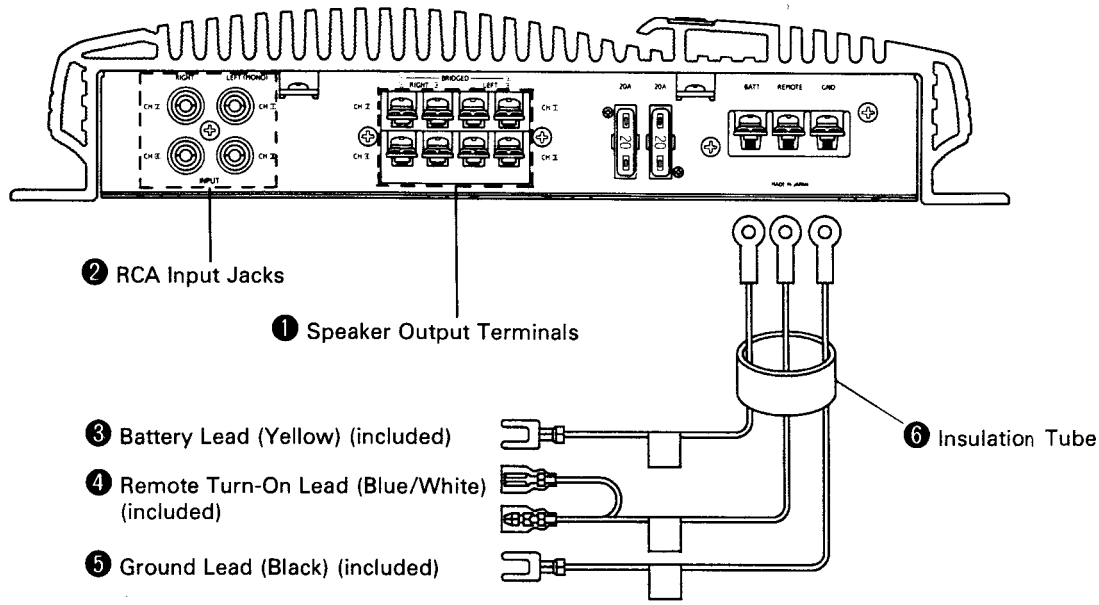
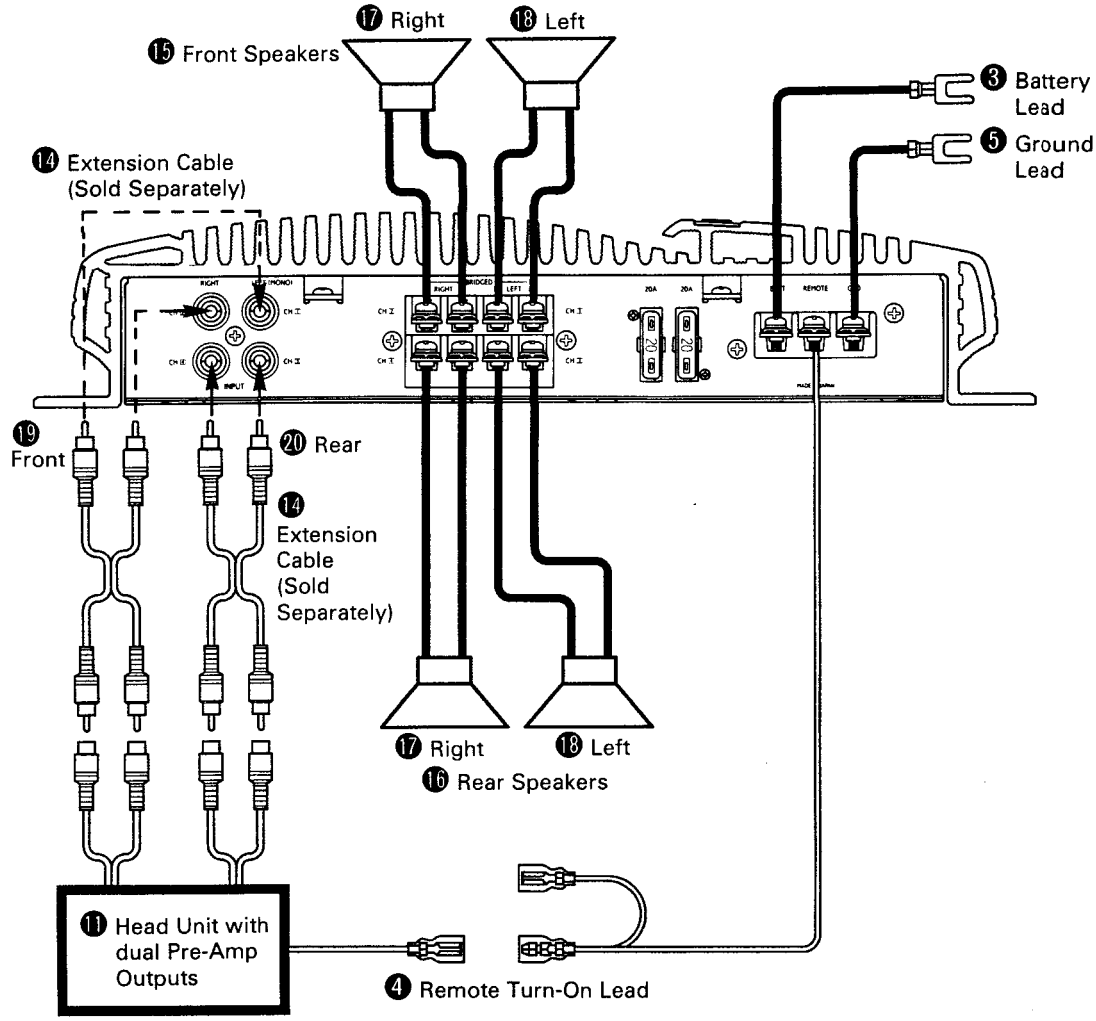

❷ RCA Input Jacks
❶ Speaker Output Terminals
❸ Battery Lead (Yellow) (included)
❹ Remote Turn-On Lead (Blue/White) (included)
❺ Ground Lead (Black) (included)
❻ Insulation Tube

Fig. 3/Abb. 3

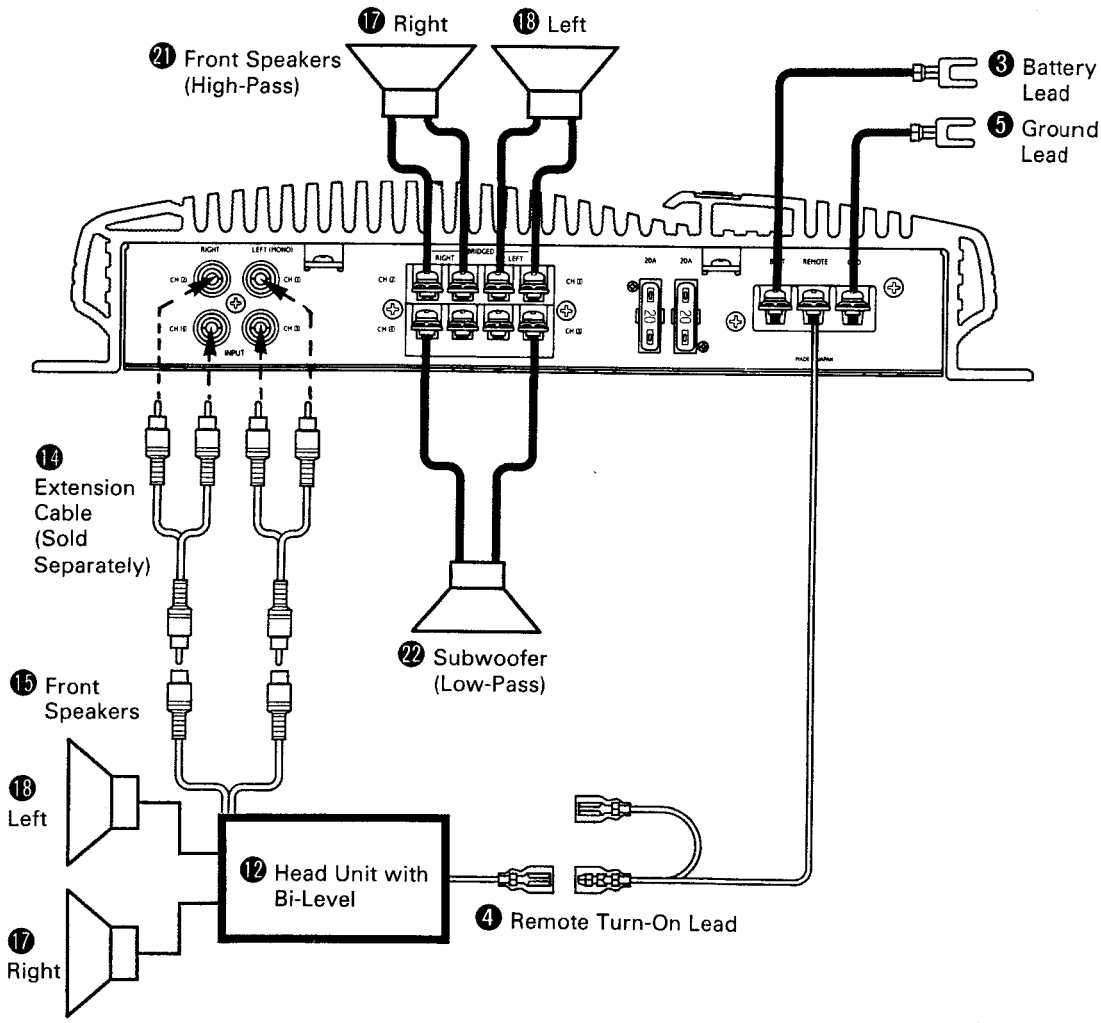
[4]-Channel System/[4]-Kanal-System/Système à [4]-canaux/ Sistema a [4]-canali/Sistema de [4] canales/[4]-kanalssystem



	❼ Input Mode Selector Switch	❽ Active Dividing Network Mode Selector Switch	❾ Input Channel Selector Switch	❿ Acoustic Compensation Switch
CH 1/2	[1] (MONO) ST [1]+[2] INPUT MODE	OFF HP LP FILTER	[1]/[2] [3]/[4] [1]+[3]/[2]+[4] INPUT CHANNEL	OFF ON ACOUSTIC COMPENSATION
CH 3/4	[3] (MONO) ST [3]+[4] INPUT MODE	OFF HP LP FILTER		

Fig. 4/Abb. 4

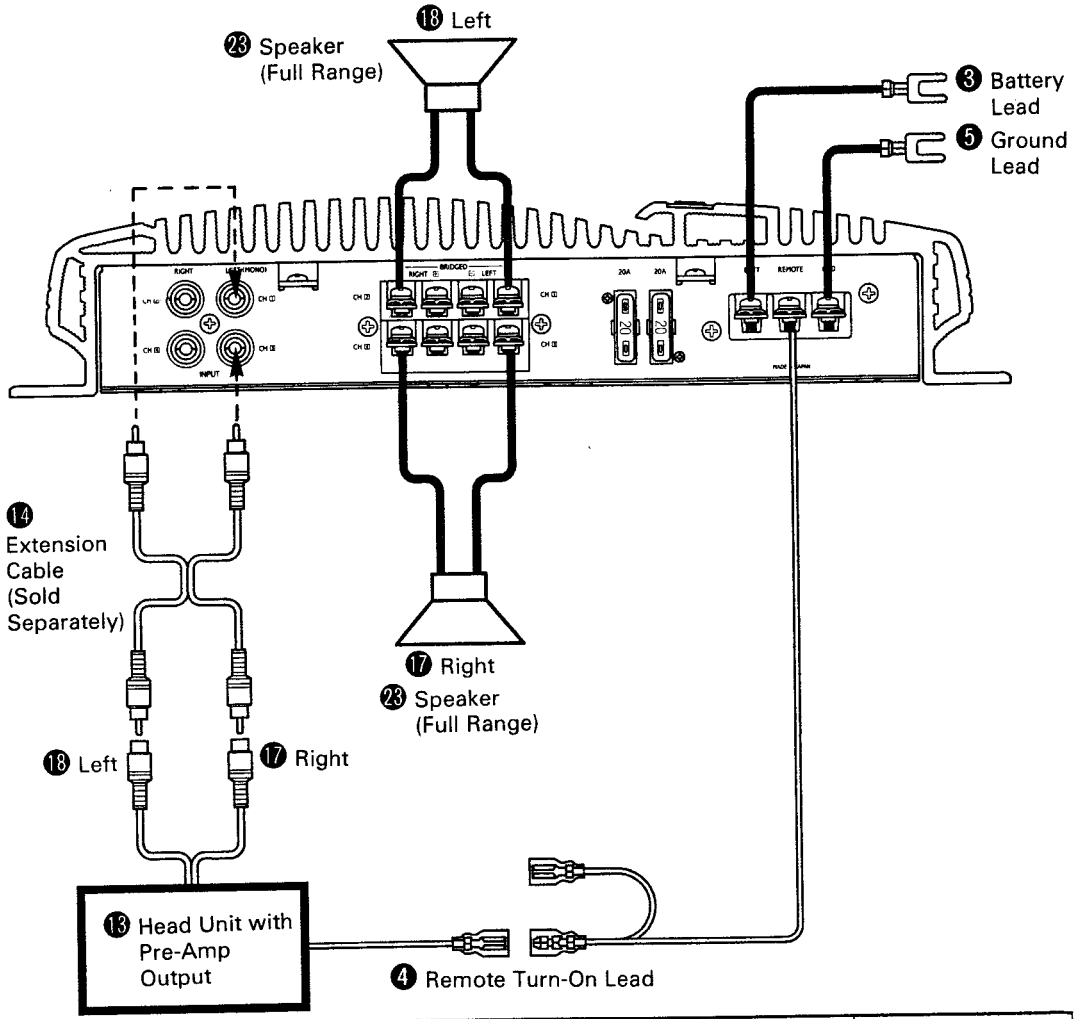
[3]-Channel System/ [3]-Kanal-System/Système à [3]-canaux/ Sistema a [3]-canali/Sistema de [3] canales/ [3]-kanalssystem



	❼ Input Mode Selector Switch	❽ Active Dividing Network Mode Selector Switch	❾ Input Channel Selector Switch	❿ Acoustic Compensation Switch
CH 1/2	[1] (MONO) ST [1]+[2] INPUT MODE	OFF HP LP FILTER	[1]/[2] [3]/[4] [1]+[3]/[2]+[4] INPUT CHANNEL	OFF ON ACOUSTIC COMPENSATION
CH 3/4	[3] (MONO) ST [3]+[4] INPUT MODE	OFF HP LP FILTER		

Fig. 5/Abb. 5

**[2]-Channel System (Full Range)/[2]-Kanal-System (Volle Reichweite)/
Système à [2]-canaux (Large bande)/Sistema a [2]-canali (Gamma piena)/
Sistema de [2] canales (Gama completa)/[2]-kanalssystem (Bredband)**



	❼ Input Mode Selector Switch	❽ Active Dividing Network Mode Selector Switch*	❾ Input Channel Selector Switch	❿ Acoustic Compensation Switch
CH 1/2	[1] (MONO) ST [1]+[2] INPUT MODE	OFF HP LP FILTER	[1]/[2] [3]/[4] [1]+[3]/[2]+[4] INPUT CHANNEL	OFF ON ACOUSTIC COMPENSATION
CH 3/4	[3] (MONO) ST [3]+[4] INPUT MODE	OFF HP LP FILTER		

Fig. 6/Abb. 6

English

INTRODUCTION

At Alpine, Sonic Excellence is a goal we consider most important. Your purchase of this component has told us you feel the same. We take great pride in the long tradition of excellence in sound quality that the Alpine name represents. Now as a part of that tradition, we welcome you to the great number of discerning audiophiles who own Alpine products.

This manual has been prepared to help you maximize your enjoyment of the outstanding performance and features of your new Alpine 3555 4/3/2 Channel Power Amplifier.

This power amplifier incorporates many advanced technical and performance features. To realize the exceptional performance of which this product is capable, it is necessary that all signal sources, speakers, and interconnection devices are of the highest sonic quality.

We recommend Alpine Head-Units, Active Dividing Networks, Speaker Systems, High Quality Interconnection/Speaker Cables and Accessories wherever possible.

This power amplifier is capable of producing over 150 watts per channel in its 2-channel bridged mode. Therefore, it is imperative to use speakers that can handle such high power levels.

Due to the complexity of this product, we strongly recommend that the 3555 be installed by your authorized Alpine dealer.

Please study this manual carefully and become acquainted with all the special features and capabilities of your new Alpine 3555. Should you have any questions, please consult your authorized Alpine dealer.

FEATURES

- **4/3/2 CHANNEL OPERATION**
  The 3555 can be used as:
  a. 4-channel amplifier, producing 120W per channel into 4 Ω.
  b. 3-channel amplifier, producing 100W (4 Ω) into channels 1 & 2, and 200W (4 Ω) into the third channel.
  c. 2-channel amplifier, producing 200W per channel into 4 Ω.

- **STATUS MONITOR**
  This indicator illuminates in green when the amplifier is on and operational. This light will turn orange if any internal protection circuitry is activated.

- **ACTIVE DIVIDING NETWORK**
  A pair of built-in, switchable and independent electronic crossover networks at 80 Hz, 18 dB per octave, can be used to set up the amplifier for low-pass (subwoofer) or high-pass (tweeter/midrange satellite) applications. These networks can also be switched off to allow full-range signal amplification.

- **ACOUSTIC COMPENSATION CIRCUITRY**
  A selectable (Off or On) equalization curve can be added to the amplifier's output signal, compensating for the inherent non-linearities of the automobile interior. It extends low bass response and eliminates mid-bass boominess, giving the low frequency response of the audio system tightness and accuracy.

- **DUO-ß FEEDBACK CIRCUITRY**
  Alpine's proprietary Duo-Beta is a technologically advanced form of feedback circuitry. Duo-Beta supplies low negative feedback throughout the audio frequency bandwidth and very high negative feedback at DC. This stabilizes the amplifier, removes DC offset, and offers excellent total harmonic distortion (T.H.D.) characteristics. It also provides low transient intermodulation distortion (T.I.M.), excellent slew rate, stability, and musicality.

- **NO CURRENT LIMITING**
  Absence of current limiters in the audio section ensures low T.I.M., excellent transient response, and superb sonic quality.

- **S.T.A.R. CIRCUITRY**
  The Alpine-developed Signal Transit for Accurate Response circuit topology improves sonic properties by reducing interaction between different sections of the circuitry.

- **INPUT MODE SELECTOR**
  This switch allows the user to specify the input signal entering the amplifier.

- **INPUT CHANNEL SELECTOR**
  This switch allows the user to specify the input signal entering channels 3 and 4 of the amplifier.

FEATURES

- **DC-TO-DC SWITCHING MODE POWER SUPPLY**
  Provides excellent power output throughout the audio bandwidth (20 Hz to 20 kHz). Its soft clipping characteristics ensure superb transient response and musicality.

- **FULLY DISCRETE, COMPLEMENTARY OUTPUT CIRCUITRY**
  For excellent reliability, superb sonic performance and high current capability for accurate transient response.

- **INDEPENDENT, CONTINUOUSLY ADJUSTABLE GAIN CONTROLS FOR CH1/2 AND CH3/4**
  Allow different level settings for both pairs of channels.

- **GOLD-PLATED RCA INPUT CONNECTORS**
  For most accurate signal transmission and lowest possible loss. Gold-plated terminals are immune to signal deterioration caused by corrosion in the connectors that can develop over time.

- **GOLD-PLATED, SCREW-DOWN POWER AND SPEAKER TERMINALS**
  For high definition, minimum loss power transfer and oxidization resistance.

- **HIGH PERFORMANCE, LOW NOISE, AUDIOPHILE QUALITY ACTIVE AND PASSIVE COMPONENTS**
  For best possible performance and consistency from unit to unit.

- **THIRD-ORDER, (18 dB PER OCTAVE) CAPACITIVE/INDUCTIVE POWER SUPPLY INPUT AND OUTPUT FILTERING**
  Prevents radio frequency interference (RFI) and immunity to system noises (such as alternator whine).

- **EXTRA HEAVY DUTY CONSTRUCTION**
  Glass-epoxy printed circuit boards and separate high current power transfer bus-bars for primary voltage and ground connections inside the amplifier.

SWITCHES AND TERMINALS

Refer to Fig. 1 on page 3.

① **Acoustic Compensation Switch**
② **Input Gain Adjustment Control (Channels 1/2)**
③ **Active Dividing Network Mode Selector Switch (Channels 1/2)**
④ **Input Mode Selector Switch (Channels 1/2)**
⑤ **Input Gain Adjustment Control (Channels 3/4)**

⑥ **Active Dividing Network Mode Selector Switch (Channels 3/4)**
⑦ **Input Mode Selector Switch (Channels 3/4)**
⑧ **Input Channel Selector Switch**
⑨ **RCA Input Jacks (Channels 1/2)**
⑩ **Speaker Output Terminals (Channels 1/2)**

⑪ **Fuse Blocks (20A x 2)**
⑫ **Battery Lead Terminal**
⑬ **Remote Turn-On Lead Terminal**
⑭ **Ground Lead Terminal**
⑮ **RCA Input Jacks (Channels 3/4)**

⑯ **Speaker Output Terminal (Channels 3/4)**
⑰ **Status Monitor**

PRECAUTIONS

- Improper wiring connections could cause damage to your vehicle's electrical system and/or the 3555 amplifier. Carefully follow the wiring instructions in this manual.
- Attaching the battery lead to the positive (+) terminal of the battery should be the last connection after all other connections are made.
- Due to the high power output of the 3555, it is important that all connections are clean and well secured, or damage could result.
- Be sure that the 3555 is mounted in a way that will allow for free air circulation and heat dissipation.
- When changing fuses, be sure to replace the old fuse with one of the same amperage. Use of improper fuses can lead to serious damage to components.

CONNECTIONS

Refer to Figs. 3 — 6 on pages 4 — 7.

Before making connections, be sure to turn the power off to all audio components. Insulation tubes for the speaker leads and the power supply leads are supplied with the 3555, route the speaker leads and the power supply leads separately through these tubes.

CAUTION:

Always keep the CH 3/4 RCA inputs of the 3555 connected to a signal source while the amplifier is in operation. If CH 3 and CH 4 inputs are not tied to the signal source, the source and the amp will not have a common ground reference point, and high output distortion may result. This is due to special grounding characteristics that have been implemented in the 3555 to ensure an installation-noise-free operation.

❶ Speaker Output Terminals

The 3555 has two sets of speaker outputs. Be sure to observe correct speaker output connections and phasing. In the stereo mode, connect the right speaker output to the right speaker and the left to left. Connect the positive output to the positive speaker terminal and the negative to negative. In the bridged mode, connect the left positive to the positive terminal on the speaker and the right negative to the negative terminal of the speaker. Do not use the speaker (—) terminal commonly for right and left speakers or connect it to the vehicle's chassis ground.

NOTE:

Do not connect speaker leads together or to chassis ground.

❷ RCA Input Jacks

Connect these jacks to the line out leads on your head unit using RCA extension cables (sold separately). Be sure to observe correct channel connections; Left to Left, Right to Right, Front to Front, and Rear to Rear.

❸ Battery Lead (Yellow) (Included)

Connect this lead directly to the positive (+) terminal of the vehicle's battery. ***Do not connect this lead to wiring in the vehicle's electrical system.*** Be sure to add a 40 amp (or two 20A fuses in parallel) as close as possible to the battery's positive (+) terminal. This fuse will protect your vehicle's electrical system in case of a short circuit. If you need to extend this lead, the wire gauge should be 8 AWG or larger.

❹ Remote Turn-On Lead (Blue/White) (Included)

Connect this lead to the remote turn-on or power antenna (positive trigger, (+) 1 2V only) lead of your head unit.

❺ Ground Lead (Black) (Included)

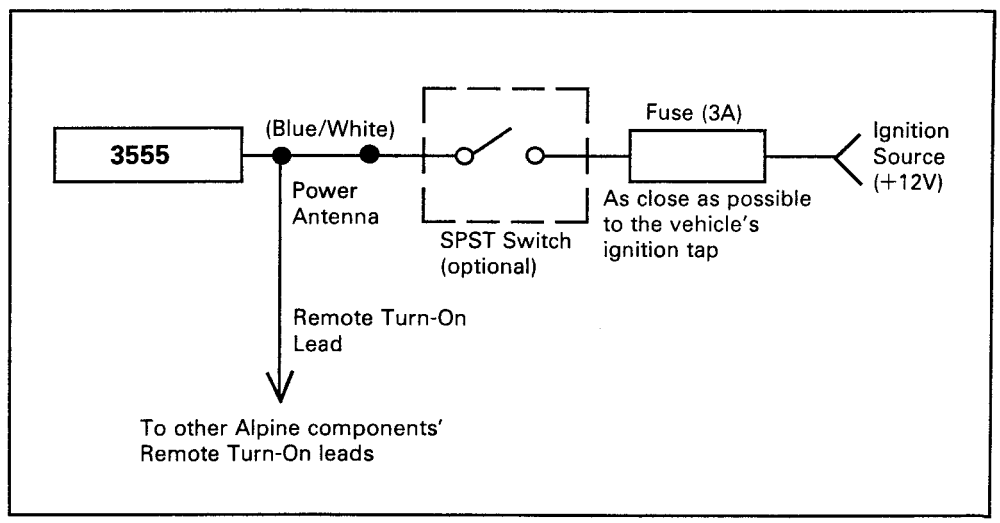
Connect this lead securely to a clean, bare metal spot on the vehicle's chassis. Verify this point to be a true ground by checking for continuity between that point and the negative (—) terminal of the vehicle's battery. Ground all your audio components to the same point on the chassis to prevent ground loops.

CONNECTIONS

Please check your head unit for the conditions listed below:

a. The head unit does not have a remote turn-on or power antenna lead.
b. The head unit's Power antenna lead is activated only when the radio is on (turns off in the tape or CD Mode).
c. The head unit's power antenna lead is logic level output (+) 5V, negative trigger (grounding type), or cannot sustain (+) 12V when connected to other equipment in addition to the vehicle's power antenna. If any of the above conditions exist, the remote turn-on lead of your 3555 must be connected to a switched power source (ignition) in the vehicle. Be sure to use a 3A fuse as close as possible to this ignition tap. Using this connection method, the 3555 will turn on and stay on as long as the ignition switch is on.

If this is objectionable, a SPST (Single Pole, Single Throw) switch, in addition to the 3A fuse mentioned above, may be installed in-line on the 3555 turn-on lead. This switch will then be used to turn on (and off) the 3555. Therefore, the switch should be mounted so that is accessible by the driver. Make sure the switch is turned off when the vehicle is not running. Otherwise, the amplifier will remain on and drain the battery.



❻ Insulation Tube
❼ Input Mode Selector Switch
❽ Active Dividing Network Mode Selector Switch
* For Subwoofer operation, switch to LP.
For High Pass, Satellite operation, switch to HP. (Fig. 6)
❾ Input Channel Selector Switch
❿ Acoustic Compensation Switch
⓫ Head Unit with Dual Pre-Amp Outputs
⓬ Head Unit with Bi-Level
⓭ Head Unit with Pre-Amp Output
⓮ Extension Cable (Sold Separately)

CONNECTIONS

⓯ Front Speakers
⓰ Rear Speakers
⓱ Right
⓲ Left
⓳ Front
⓴ Rear
㉑ Front Speakers (High-Pass)
㉒ Subwoofer (Low-Pass)
㉓ Speaker (Full Range)

INSTALLATION

Refer to Fig. 2 on page 4.

Due to the high power output of the 3555, considerable heat is produced when the amplifier is in operation. For this reason, the amplifier should be mounted in a location which will allow for free circulation of air, such as inside the trunk. For alternate installation locations, please contact your authorized Alpine dealer.

1. Using the amplifier as a template, mark the four screw locations.
2. Make sure there are no objects behind the surface that may become damaged during drilling.
3. Drill the screw holes.
4. Position the 3555 over the screw holes, and secure with four self-tapping screws.

NOTE:
To securely connect the ground lead, use an already installed screw on the metal part of the vehicle (marked (★)).

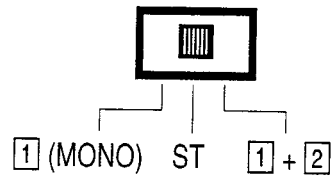
① Self-Tapping Screws (M4 x 14)
② Ground Lead
③ Chassis
④ Holes

SWITCH SETTINGS

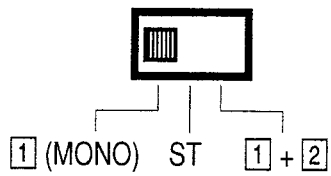
Input Mode Selector Switches ④ and ⑦

The switch modes shown are for CH1/2. Same explanations apply to mode selection for CH3/4.

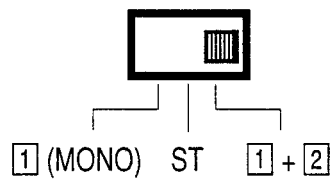
a) Set to the "ST" position (center) when the two channels are used in stereo.



b) Set to the "1 (MONO)" position when the two channels are used for one channel of a stereo or bridged system.

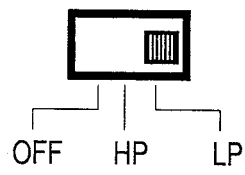


c) Set to the "1 + 2" position when the two channels are used for a subwoofer system which uses the right channel and left channel signals summed.



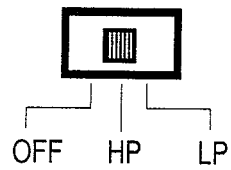
Active Dividing Network Mode Selector Switches ③ and ⑥

a) Set to the "LP" position when the amplifier is used for the low-pass (subwoofer) system. The frequencies higher than 80 Hz will be cut (at a rate of 18 dB per octave).

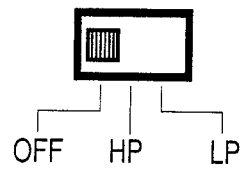


SWITCH SETTINGS

b) Set to the "HP" position when the 3555 is used for the high-pass (tweeter/midrange) system. The frequencies lower than 80 Hz will be cut (at a rate of 18 dB per octave).



c) Set to the "OFF" position when the 3555 is used for the regular stereo system with full range speakers. The full bandwidth will be output without cutting the high or low frequencies.



Input Gain Adjustment Controls ② and ⑤

After setting your head unit's volume control 1/4 of a turn down from the maximum output level, rotate the Input Gain Adjustment Controls ② and ⑤ with a #0 flat blade screwdriver and adjust the input gain to the point where there is maximum volume with no distortion.

Status Monitor

This indicator lights in green when the power is on. The 3555 has built-in protection circuitry. If, for some reason, this protection circuit is activated, the indicator turns orange. If this happens, turn the system off, find the cause of the problem and remedy the situation. This includes checking all your connections and wiring. If the indicator remains orange when the system is turned on, consult your authorized Alpine dealer.

NOTE:

The indicator will illuminate in orange for a few seconds when the power is turned on as the turn on muting circuit is activated. This is normal.

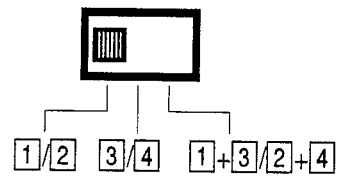
SWITCH SETTINGS

Input Channel Selector Switch ⑧ (CH 3/4)

a) Setting this switch to [1] / [2] will send the signal at the inputs of CH1/2 to CH3/4 of the 3555. This eliminate the need for Y-adaptors when using a head unit with a single pair of pre-amp output.

b) Set this switch to [3] / [4] to have the inputs of CH3/4 accept independent input signals. An example of this application would be the use of a head unit with dual pre-amp outputs.

c) Setting this switch to [1] + [3] / [2] + [4] will sum the CH1 & CH3 input and send it to CH3 while the CH2 & CH4 inputs are summed and sent to CH4. When used with a dual-preamp output head unit, this will provide a non-fading (constant bass) subwoofer output with fadable front and rear output going to a separate Satellite amplifier.



Acoustic Compensation Selector Switch

a) Turn this switch on to compensate for the loss of low bass and to reduce midbass boominess.

b) Listen to the system with the switch in both the ON and OFF positions. Since the response of the system can vary depending on vehicle type, interior size, and other characteristics of the listening area, choose the position that provides the best sound reproduction.

SPECIFICATIONS

Power Output:
- 4-Channel Mode ..... 120W x 4 (Max.)
  50W x 4 (into 4 ohms with 0.04% THD) from 20 Hz to 20 kHz
- 3-Channel Mode ..... 100W x 2 and 200W x 1 (into 4 ohms with 10% THD)
- 2-Channel Mode ..... 200W x 2 (into 4 ohms with 10% THD)

Frequency Response ..... 10 Hz to 50 kHz (+0, −1 dB)
Signal-to-Noise Ratio ..... 105 dB (referenced to rated power)
Slew Factor ..... Greater than 5
Input Sensitivity
- (for rated power output) ..... 100mV to 2V (500 mV at center detent)

Input Impedance ..... 10k ohms Min.
Speaker Impedance ..... 4 or 2 ohms (stereo), 4 ohms (bridged)
Active Dividing Network
- Frequency and Slope ..... 80Hz, 18 dB per octave

Acoustic Compensation Effect ..... +5 dB at 40 Hz, −1 dB at 150 Hz
Power Requirement ..... 11 − 16V DC Negative Ground
Dimensions (W x H x D) ..... 263mm x 55mm x 300mm
(10-3/8" x 2-3/16" x 11-4/5")
Weight ..... 4 kg (8 lbs. 13 oz)

NOTE:
For product improvement, specifications and design are subject to change without notice.